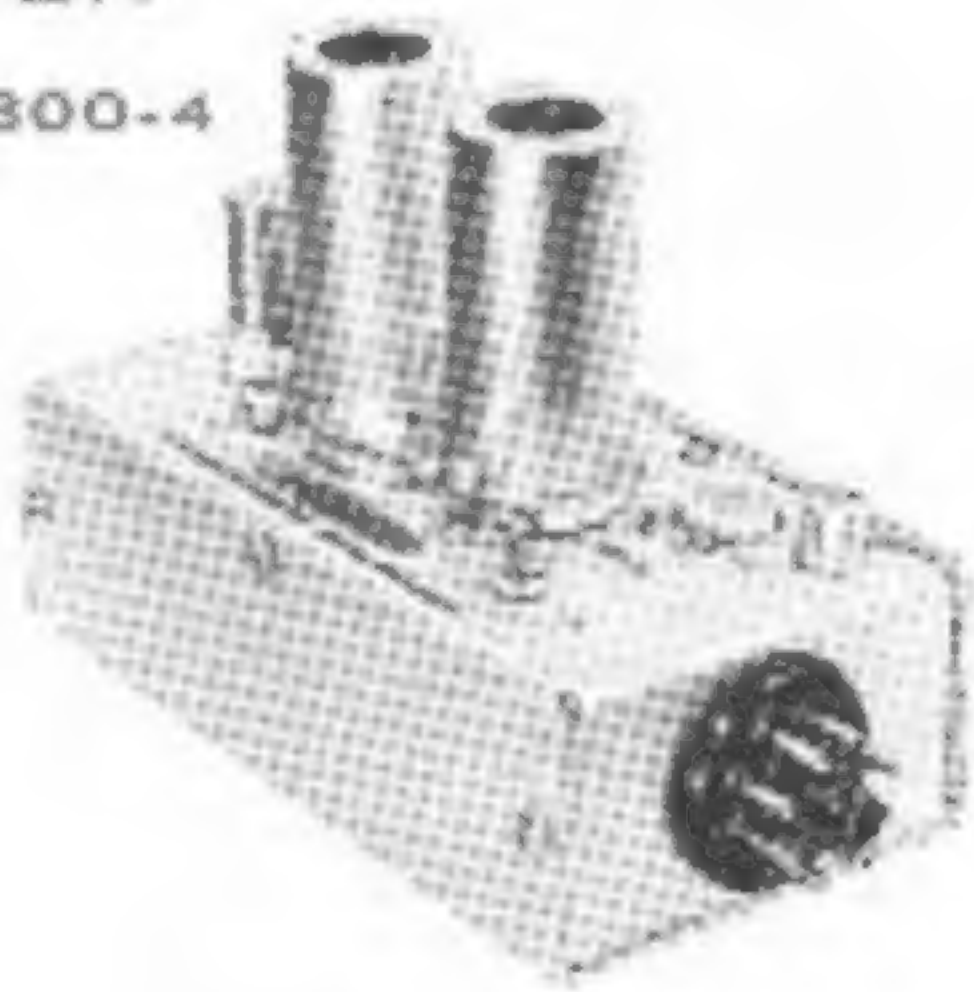


Assembly and Operation of the



2-METER CONVERTER

MODEL SBA-300-4





Dimensions.

Overall 2-5/8" wide x 5-3/4" long x 3-3/4" high.

Net Weight.

10-1/2 oz.

Test Equipment Used In Preparing Specifications

Measurements, And Alignment Instructions.

Measurements Corporation Model 80 Standard Signal Generator
(with 50 Ω pad).

Heathkit Model IM-13 Vacuum Tube Voltmeter.

SCHEMATIC OF THE
HEATHKIT 2-METER CONVERTER
MODEL SBA-300 4

OPERATION

IMAGE TRAP ADJUSTMENT

- () Tune the receiver across the 2-meter band. If an IF image appears at the high or low end of the band (this would be an FM broadcast station near your locality), turn image trap adjustment C1 for minimum signal leak-through. If more than one image appears, adjust the image trap for minimum signal on the stronger image, or adjust the image trap between the two stronger signals.

ANTENNA TRIMMER ADJUSTMENT

- () Adjust trimmer capacitor C2 for the best signal-to-noise ratio when tuned to a weak 2-meter signal.

Instrument alignment should not be required, as the previous adjustments of the coils and capacitors should provide Converter operation equal to or better than the specifications. In case you have the necessary equipment, and prefer instrument alignment, refer to Page 26 and 27 of this Manual.

CRYSTAL INFORMATION

The 38,66666 megacycle crystal supplied with the Converter provides reception from 144 to 146 megacycles. Other crystal frequencies can be used to cover different 2-megacycle segments between 142 and 150 megacycles. The following chart lists some of the crystal frequencies that can be used. In each case, the output frequency of the Converter is between 28 and 30 mc, which corresponds to 10-meter reception with the SB-300 Receiver.

CRYSTAL CHART

(Frequencies in megacycles)

CONVERTER CRYSTAL	COVERAGE
38	142 to 144
38.66666	144 to 146
39.33333	146 to 148
40	148 to 150

When purchasing a crystal for use with this Converter, you should specify the frequency and the following crystal characteristics. Crystals that do not have these characteristics will not provide optimum performance.

Load capacitance (C1)	19.1 μ f
Internal capacity (C0)	7 μ f, maximum
Series resistance (Rs)	20 Ω , maximum
Drive level	10 millivolts
Mode of operation	3rd overtone

Also, if you install a crystal other than the 38,66666 megacycle crystal supplied, it will be necessary to readjust oscillator coils L6 and L7 as directed in the Initial Test And Adjustment section of the manual.